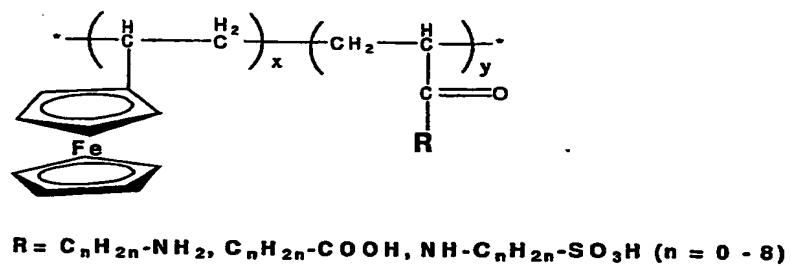
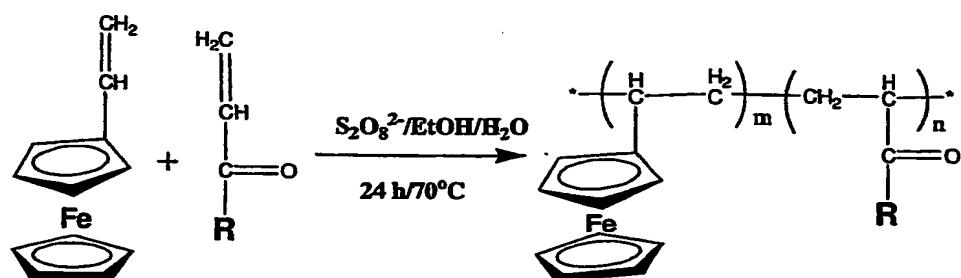


**Figure 4.** Illustration of redox polymer mediated biosensing process.



**Figure 5.** Structure of water-soluble and cross-linkable ferrocenyl redox polymer.



$\text{R} = \text{C}_n\text{H}_{2n}\text{-NH}_2, \text{C}_n\text{H}_{2n}\text{-COOH}, \text{NH-C}_n\text{H}_{2n}\text{-SO}_3\text{H}$  ( $n = 0 - 8$ )

**Figure 6.** Polymerization mechanism of the redox polymer

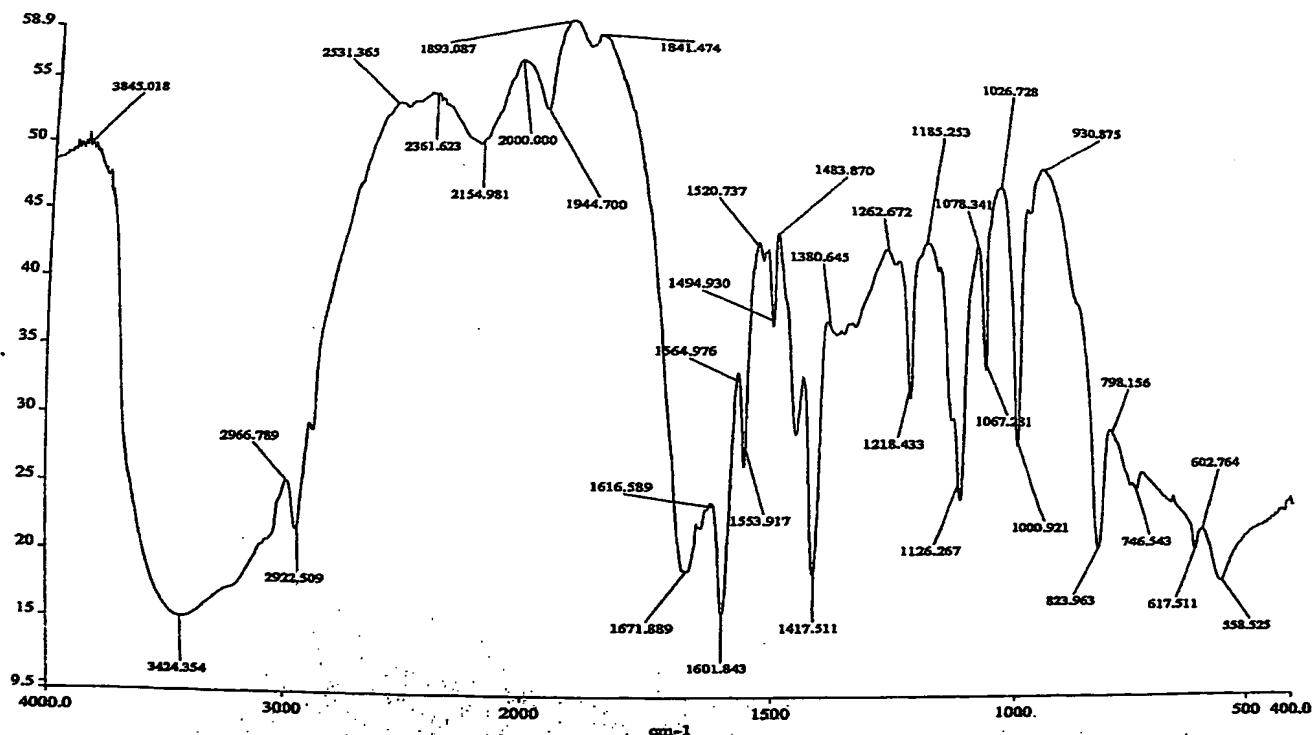


FIGURE 7. FT-IR Spectrum of PAA-VFc and PAAS-VFc redox polymer

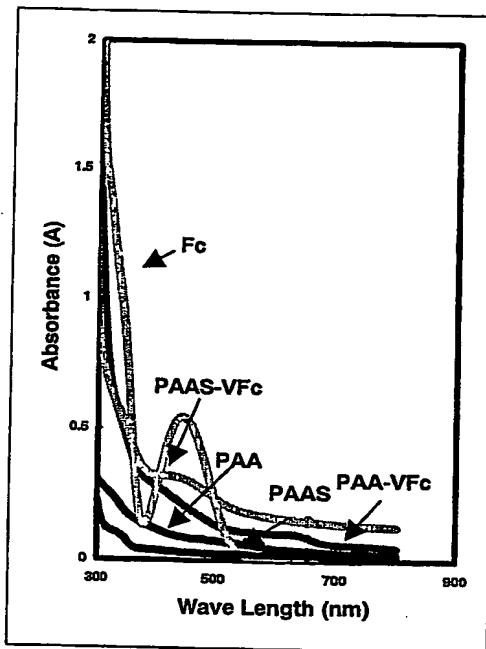
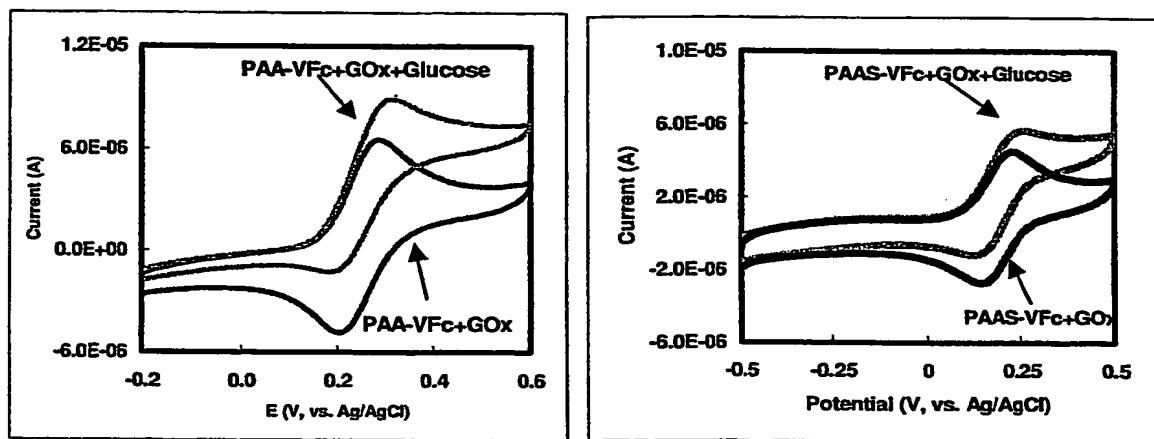


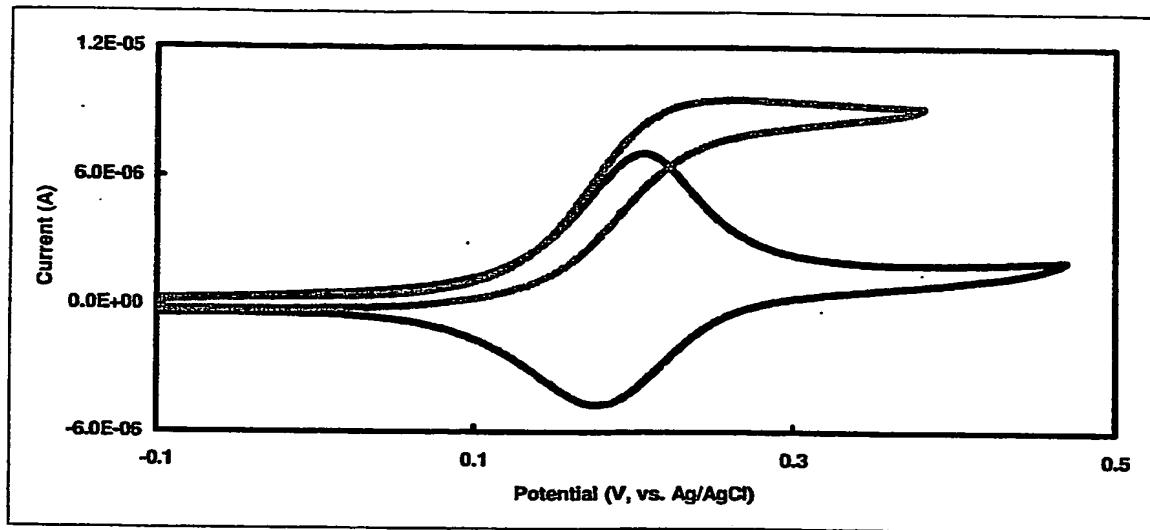
FIGURE 8. UV-visible spectra of Fc, PAA, PAAS and their VFc co-polymers.

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**Figure 9.** Cyclic voltammograms of redox polymers in various systems.

Phosphate-buffered saline, potential scan rate = 100 mV/s



**Figure 10.** Cyclic voltammogram of cross-linked PAA-VFc-GOx-BSA film on gold electrode.  
PBS, potential scan rate 50 mV/s.

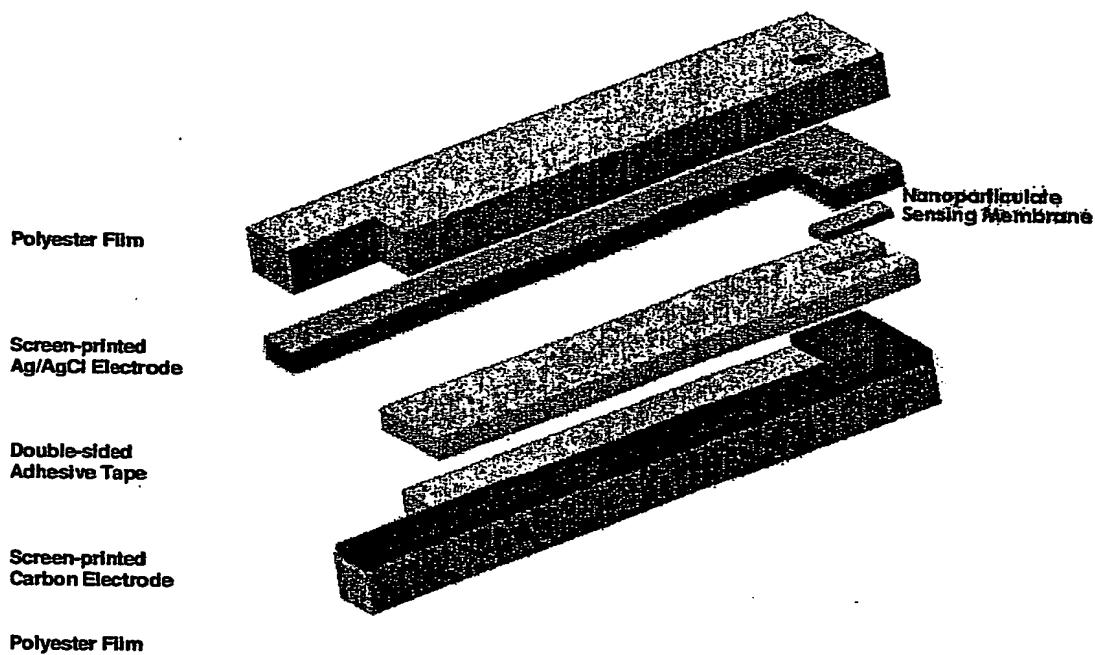


Figure 11

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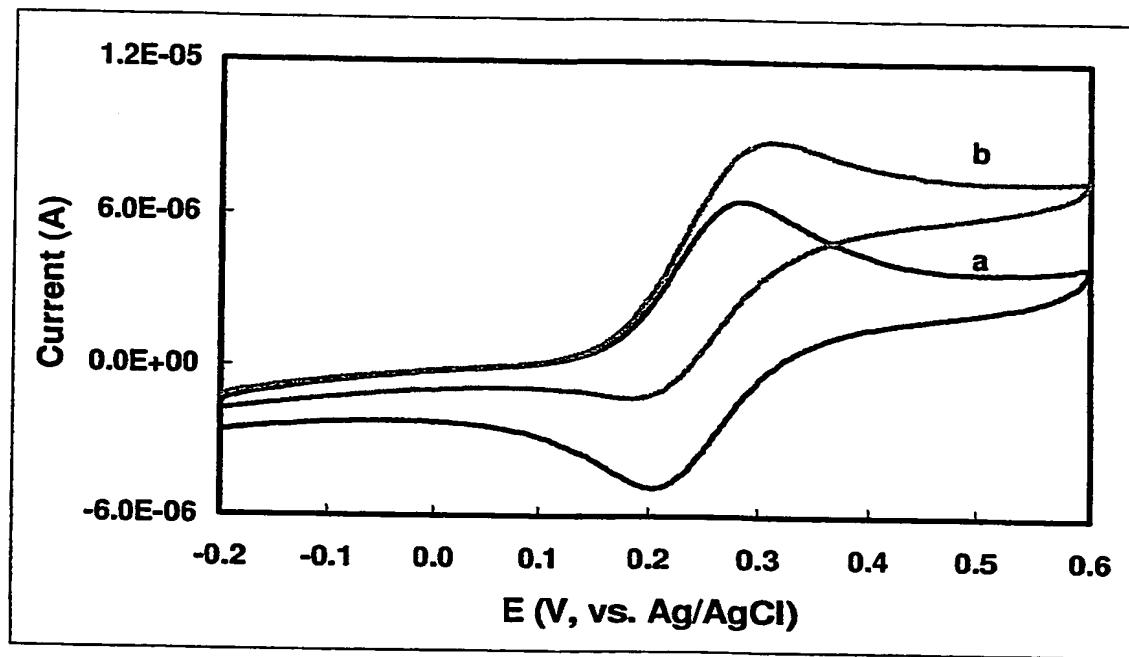


Figure 12

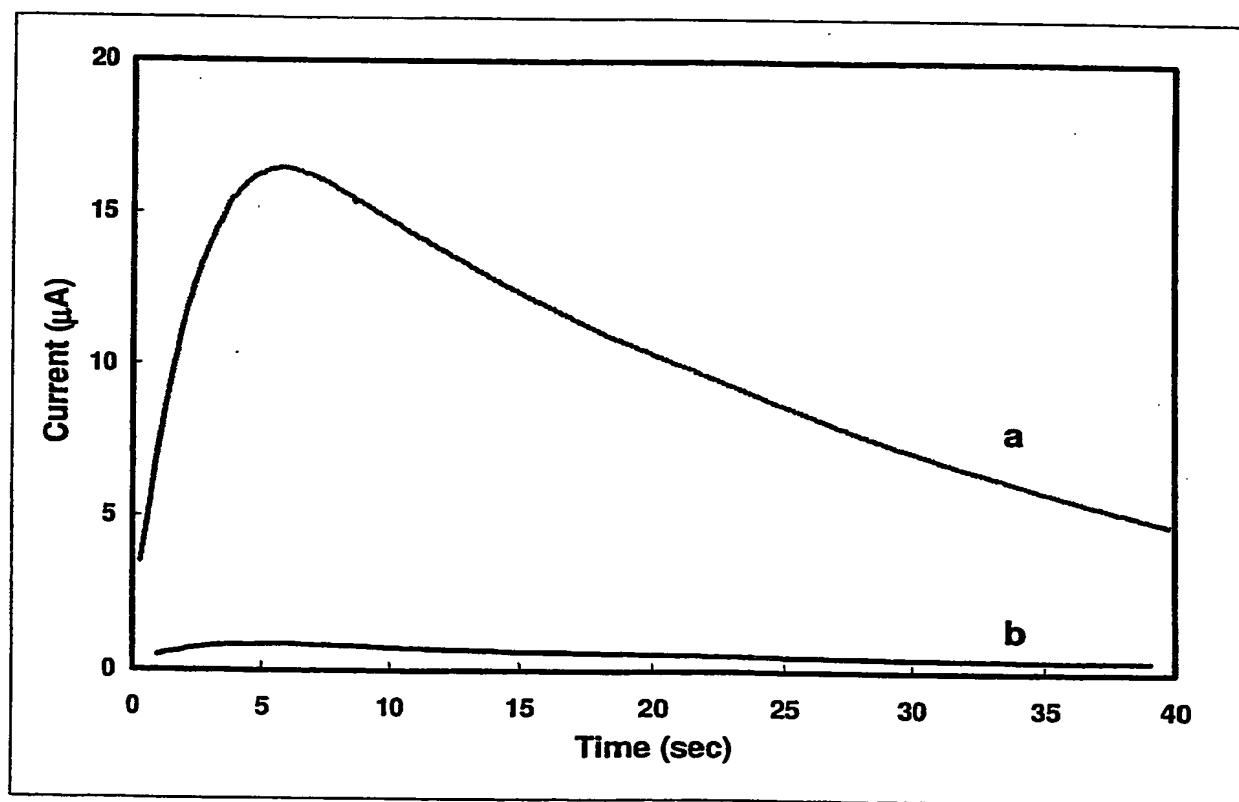


Figure 13

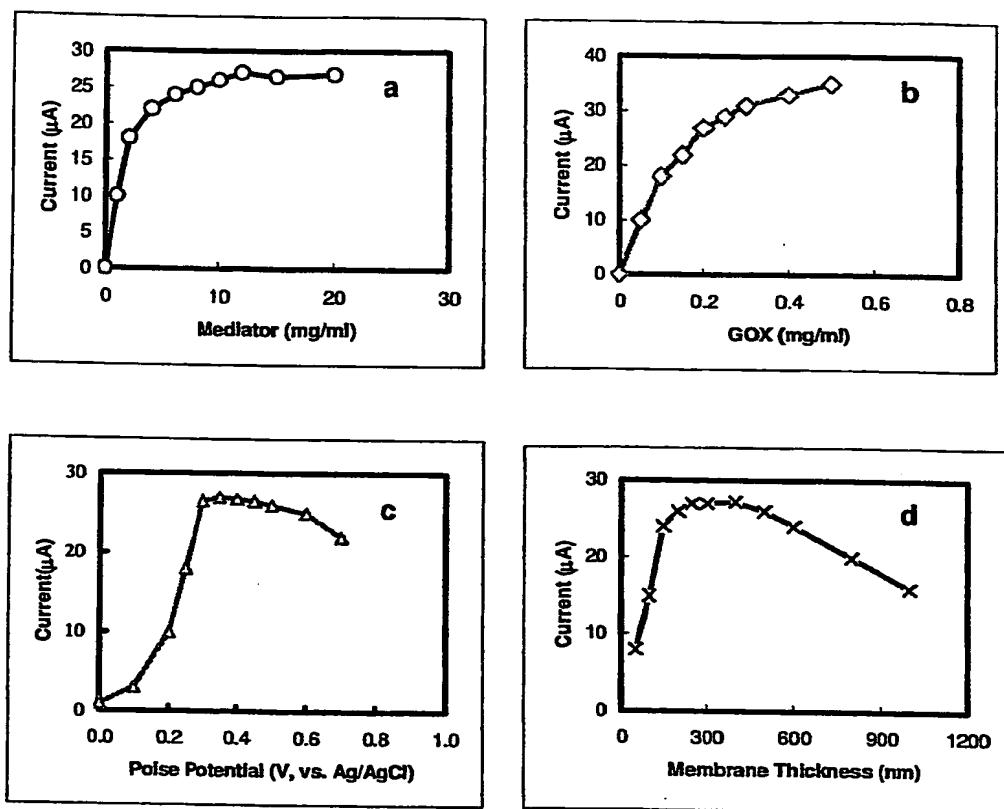


Figure 14

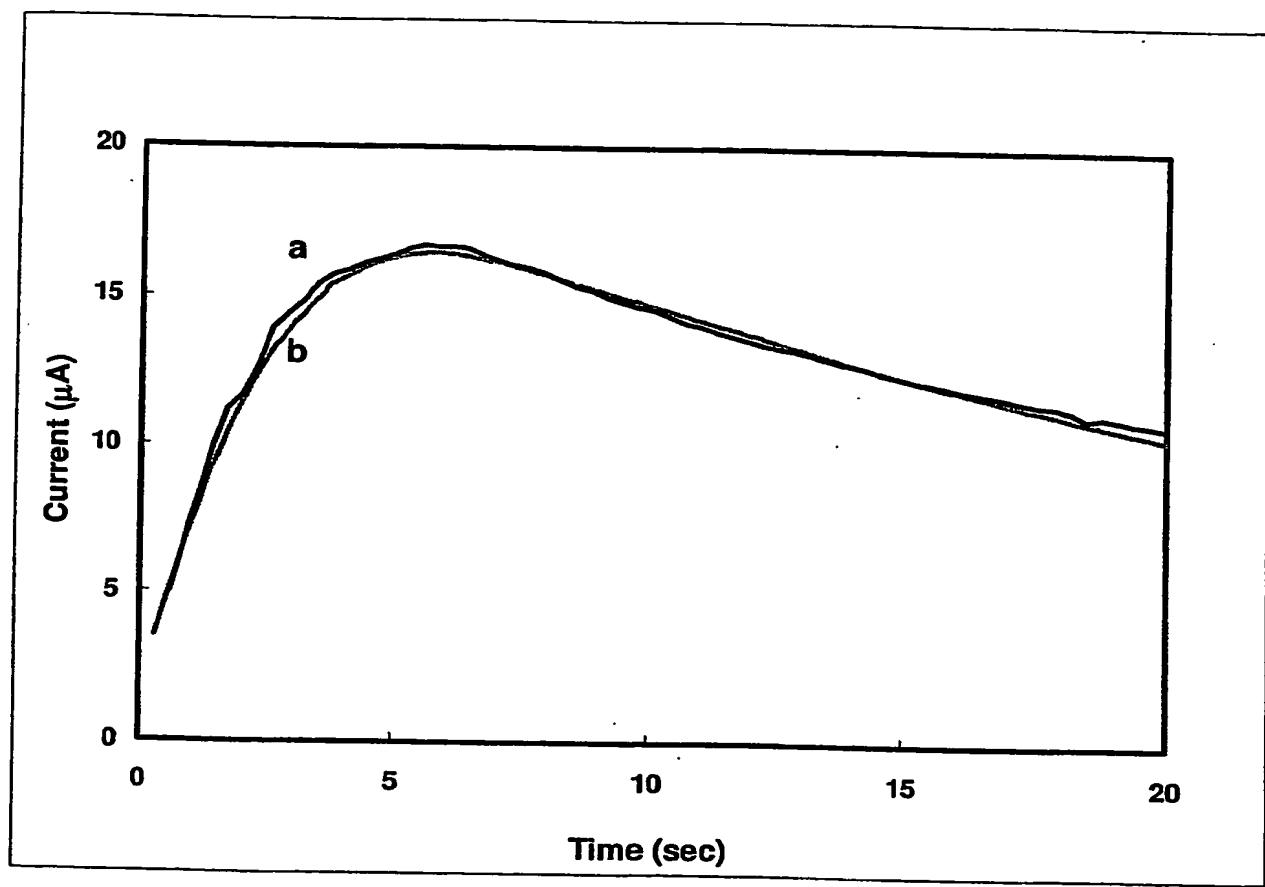


Figure 15

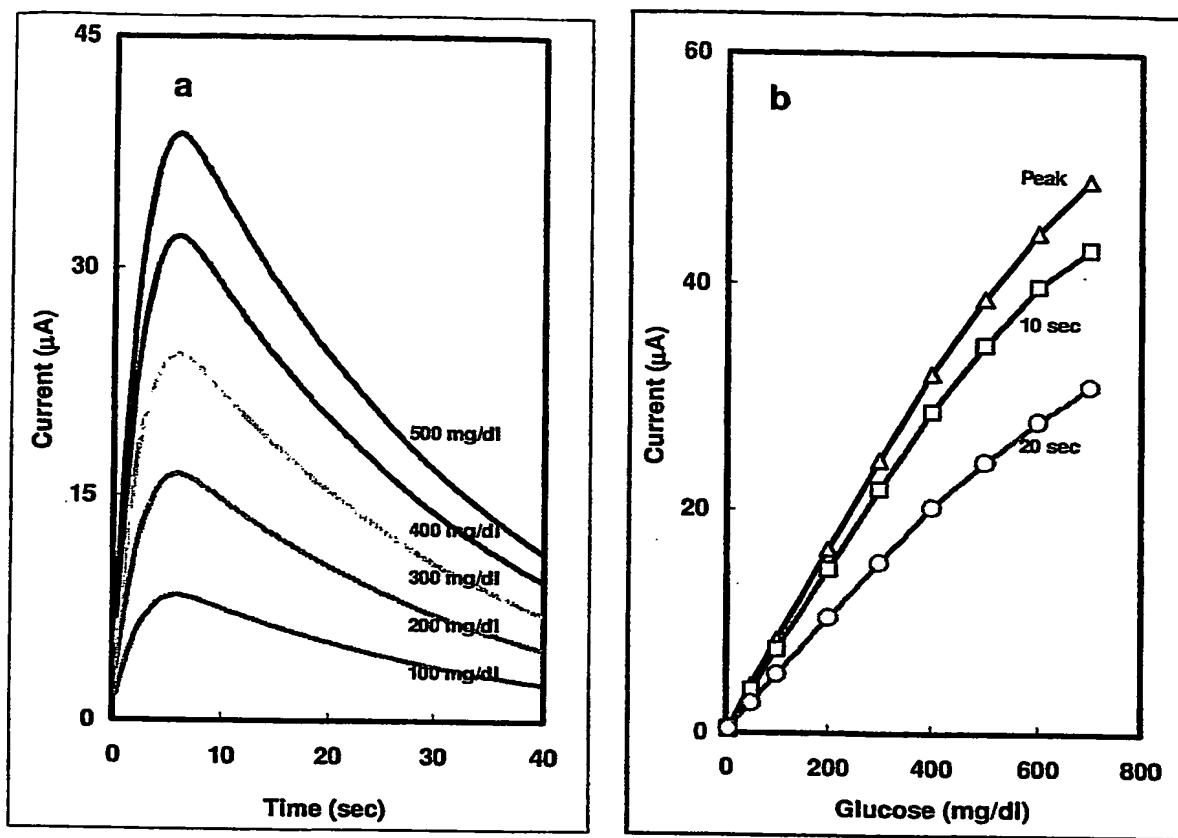


Figure 16